

SCIENCE!

- Goal : Understand the natural world.
- How scientists think

Scientific Method:

1. Observe

- Figure out what you are studying

2. Ask questions and perform research.

- Credible sources

Most credible sources are peer-reviewed journals.

- The quality of your answers is determined by the quality of your questions.

3. Form a hypothesis.

Hypothesis is an educated guess based on your observations and research.

4. Test the hypothesis (perform an experiment)

- Within an experiment:

- Independent variable:

Variable YOU change!

We ONLY want 1!

- Dependent Variable:

Result of changing independent variable.

- Constants: Parts of experiment that stay the same.

- Control Group:

Group that receives no treatment or has anything done to it.

Used to establish a baseline of performance.

- Experimental Group:

Group that we change the independent variable.

- Repeated Trials:

Do these to minimize error, which increases the confidence in our results.

5. Gather Data.

- Data is evidence.
- We want to show what is really happening versus what we think is happening.
- Data is measured.
- Two types of data:
 1. Quantitative → numbers
NEEDS A UNIT!
 2. Qualitative (categorical)
characteristics of objects

6. Conclusion:

Restate your hypothesis,
then state whether data
supported or rejected
your hypothesis.

7. Sharing:

- Communicate with the scientific community.
- Publish the experiment.

Science is always tested.